

# Laparoscopic Management of Presacral Myelolipoma

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## ABSTRACT

Myelolipomas are rare, benign nonfunctioning tumors, most commonly found in the adrenal glands. At least 43 cases of extra adrenal myelolipomas have been reported, with at least 50% of these reported cases occurring in the presacral region. Herein we report a case of presacral myelolipoma managed laparoscopically.

**Key Words:** Presacral myelolipoma, laparoscopy, benign tumor.

## INTRODUCTION

Myelolipomas are rare, benign tumors, consisting of hematopoietic cells and mature adipose tissue.<sup>1,2</sup> They are most commonly found in the adrenal glands; however, there have been several reported cases of extra adrenal myelolipomas with at least 50% of those reported cases occurring in the presacral region.<sup>2-5</sup> We present a case of a patient undergoing laparoscopic colectomy for diverticulitis with simultaneous resection of a presacral myelolipoma.

## CASE REPORT

A 74-year-old woman with a history of recurrent diverticulitis was found to have an incidental pelvic mass discovered on an abdominal/pelvic CT (**Figure 1**). The trilobed pelvic mass was noted to have increased in size over several months. The patient's past medical history was significant for squamous cell carcinoma of the cervix diagnosed and treated 10 years prior with a total abdominal hysterectomy and bilateral salpingo-oophorectomy. Other medical problems included a recent episode of pulmonary embolism, hyperlipidemia, and hypertension.

She was without any abdominal or pelvic symptoms denying any pelvic pressure, pain, hematuria, or changes in bowel function. Given the patient's prior history of malignancy, a workup for possible metastatic disease was performed. Tumor markers (CA 125, CA 19-9, and CEA) were all within normal limits, and physicians in the gynecological oncology consultation felt confident that the tumor was not a recurrence.

Positron emission tomography scan showed the tumor to be hypermetabolic, and CT-guided biopsy of the mass was attempted, with inconclusive results. The patient consented to laparoscopic sigmoid resection for the diverticulitis along with an excisional biopsy of the pelvic mass given the inconclusive nature of imaging studies and biopsy.

Intraoperatively, the sigmoid colon was first dissected off the lateral peritoneal attachments using a Harmonic scalpel. The peritoneum was then scored along the mesentery of the medial and lateral side of the sigmoid colon down

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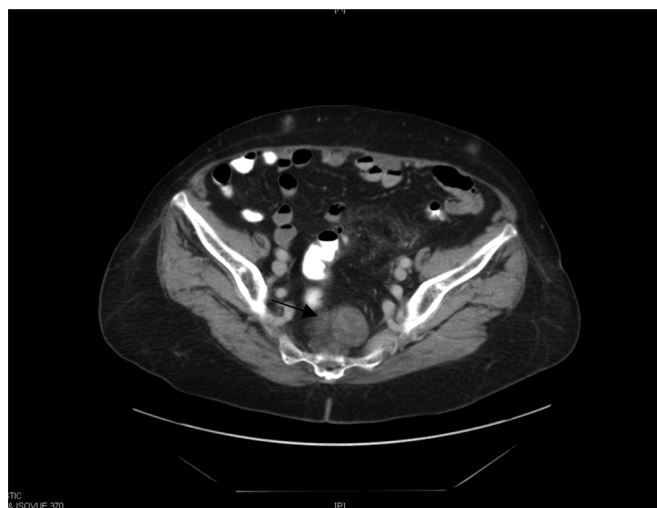
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**Figure 1.** The trilobed lobulated pelvic mass located immediately anterior to the sacrum with no invasion of surrounding structures (arrow).

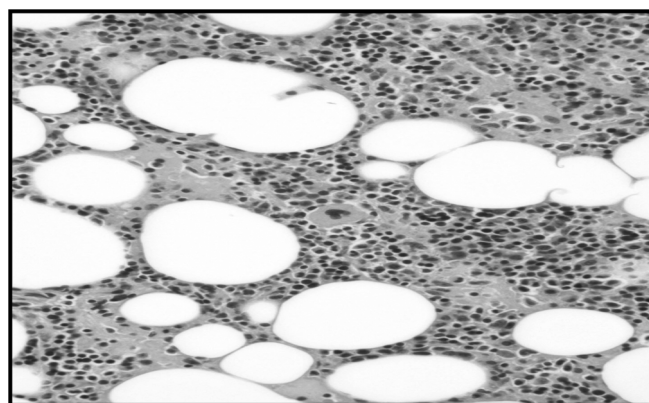
to the bilateral gutters of the medial pelvis, respectively. The mesentery of the sigmoid colon was then divided down to the level of the sacral promontory. The rectosigmoid was subsequently divided and the rectal stump retracted anterosuperiorly so as to gain access into the presacral space for biopsy of the lesion.

The mass was found to be a multilobulated, coalescing, well-encapsulated lesion. It was surrounded by a thin friable membrane, and each lobe contained a hemorrhagic gelatinous, parenchyma. A frozen section of the mass was reported as fibrous tissue, mature adipose tissue, and hematopoietic cells without evidence of tumor. The majority of tumor was removed with moderate amounts of presacral bleeding controlled with pressure and hemostatic compounds. Given the nonmalignant frozen pathology results, we felt that subtotal excision was appropriate, and no further attempts were made at complete removal. The patient had an uneventful postoperative course.

On pathologic examination, the resected lesion consisted of a 3.5 x 1.7 x 0.6-cm aggregate of tan-brown, soft, hemorrhagic tissue. Permanent sections disclosed adipose tissue with scattered foci of hematopoietic tissue, including myeloid, erythroid, and megakaryocytic elements (**Figure 2**), and the final pathology report was consistent with a myelolipoma.

## DISCUSSION

To our knowledge, laparoscopic management of presacral myelolipoma has never been described before



**Figure 2.** Histological appearance showing mature adipocytes admixed with hematopoietic tissue: myeloid, erythroid, and megakaryocytic elements (Hematoxylin-eosin x400).

this case. Given the benign nature of this tumor, surgical resections are only indicated when the nature of the tumor is in question, as in this case. Several retroperitoneal malignancies, such as teratomas, chordomas, liposarcomas, lymphomas, and neurogenic tumors, must be in the differential diagnosis for lesions in the presacral area.<sup>4,5</sup> Additionally, with this patient's prior history of gynecological malignancy, interval increase in tumor size and inconclusive preoperative workup, a surgical biopsy to evaluate the lesion was necessary. Given the necessity of a sigmoidectomy for recurrent diverticulitis, we felt a combined laparoscopic procedure would be best.

To date, at least 20 cases of presacral myelolipomas have been reported in the literature. They classically occur in older patients with the majority of cases being diagnosed in the fifth to seventh decades, and many reports showing an increased incidence in women.<sup>2,3</sup> Most presacral myelolipomas are usually asymptomatic and are discovered incidentally by abdominal/pelvic CT scans and encapsulated round masses with no infiltrative pattern.<sup>4</sup> When symptomatic, it is usually because of mass effect on adjacent structures, such as the bladder, ureters, sacral nerve plexus, and the rectum such that patients may present with symptoms of urinary retention, lower extremity radiculopathy, sciatica type pain or constipation.<sup>3</sup>

Several aspects of the case were difficult. CT-guided biopsies of the lesion were inconclusive, yielding only inflammatory connective tissue, pushing us to define this lesion surgically. In retrospect, such findings can be expected after a needle biopsy of a myelolipoma. It was serendipitous that the patient required a sigmoidectomy for diverticulitis, because gaining access to this lesion

without performing a bowel resection would be quite arduous. To gain access to the lesion, a mesorectal plane had to be followed during the sigmoid resection; therefore, a deeper and more extensive dissection than a standard sigmoid resection for diverticulitis was required. Consequently, we needed to resect a larger amount of rectosigmoid distally for fear of leaving devascularized proximal rectum. Despite staying in a mesorectal plane, presacral bleeding was also encountered as the lesion was excised. The bleeding was moderate and could be controlled with local hemostatic agents. However, it complicated the resection enough that a subtotal resection was satisfactory, especially after the benign frozen section results were noted.

Given the benign nature of these lesions, the risk of recurrence after excision is minimal, so no interval screening abdominopelvic imaging is indicated. In this case, if an interval increase is seen in the size of the mass incidentally, it is important to rule out the more common retroperitoneal malignancies mentioned previously with a percutaneous needle biopsy. Surgical intervention would not be indicated if the biopsy showed tissue elements consistent with myelolipoma and patient was without the aforementioned size effect symptoms.

## CONCLUSION

We present the case of a presacral myelolipoma that was difficult to identify without a surgical excision. Laparoscopic management of the mass and of the diverticular disease was successful and is a reasonable approach to a lesion in such a challenging location.

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